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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,830	06/05/2002	Joe Wolf	2447-016	2359
22506	7590	05/25/2005	EXAMINER	
JAGTIANI + GUTTAG 10363-A DEMOCRACY LANE FAIRFAX, VA 22030			KRAMER, NICOLE R	
			ART UNIT	PAPER NUMBER
			3762	

DATE MAILED: 05/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/030,830	Applicant(s) WOLF ET AL.	
	Examiner Nicole R. Kramer	Art Unit 3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/11/02; 6/1/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

### ***Drawings***

2. The drawings are objected to because Figure 3C contains two fifth periods ("P<sub>5</sub>") when the second "P<sub>5</sub>" is believed to be a "P<sub>6</sub>". Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as

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either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 5-7, 11-13, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,800,475 ("Jules") in view of U.S. Patent No. 6,289,247 ("Faltys"). Jules teaches applicant's basic inventive concept, a cochlear implant including a signal processor which allows for different rates of stimulation to be used for different electrodes in a multi-electrode implant, with the rates of stimulation being dependent on the time distribution of a filtered sound signal. More particularly, Jules teaches a transducer (microphone 6) for converting a sound signal to an electrical signal (via converter 7). A plurality of frequency bands are produced and processed by microprocessor (8), and two cues or stimulation commands are produced for each frequency band: a cue evidencing the energy content of the frequency band and a cue evidencing the relative temporal position of the energy cues of the frequency bands (col.

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5, lines 4-10). Examiner considers measuring the instantaneous energy of a sound signal as disclosed by Jules to include estimating the amplitude/magnitude of the frequency bands, and considers time distribution determining means as disclosed by Jules to include estimating the period of the frequency bands. Control circuit (15) decodes the cues reaching it through transmitter (3) and produces sequences for operating electrodes respectively assigned to corresponding frequency bands (col. 6, lines 41-45). The electrodes are excited as a function of the energy cue and in an order corresponding to the time relation cue (see Abstract). The transmission is carried out by amplitude modulation corresponding to the energy content cues, and frequency or phase modulation corresponding to the time relation cues (col. 8, lines 14-20). The electrodes are stimulated in a cyclical manner for each stimulation period, and thus Jules fails to teach selection means which select only one filtered signal for stimulation of an electrode in each stimulation period.

Faltys teaches a multi-channel cochlear prosthesis having a strategy selector. One of the speech processing strategies available for utilization is the "N out of M" strategy. Faltys teaches that where sequential pulsatile speech processing strategies are used, it is known to specify the number of maxima N out of M possible sequential pulsatile channels that are to be used as part of the speech processing strategy. Typically, the N channels with the greatest input levels are selected for stimulation. More specifically, Faltys discloses that where M sequential pulsatile channels are available, any number N of these M pulsatile channels, where N is thus an integer from 1 to M, may be selected as the number of maxima. (col. 3, line 56 – col. 4, line 6).

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Thus, Faltys teaches that a processor utilizing the “N out of M” strategy may select only one filtered signal for stimulation of an electrode.

It would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to modify the microprocessor of Jules to include the selector means as described by Faltys in order to transmit only stimulation corresponding to the highest energy content. Rather than stimulating the electrodes in a cyclical manner, the processor of Jules would stimulate only the electrode assigned to the frequency band having the highest energy content cue for each time frame.

5. Claims 2-4, 8-10, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,800,475 (“Jules”) in view of U.S. Patent No. 6,289,247 (“Faltys”) and further in view of U.S. Patent No. 4,441,202 (“Tong”).

Jules and Faltys fail to disclose a zero crossings detector to be utilized to determine the time relation cues. Tong demonstrates that successive zero crossings detectors and counters are a known way to measure the time distribution of a filtered sound signal (col. 3, lines 45-62). With respect to claims 4 and 10, scaling the time distribution measurement to an integral multiple would have been obvious to one of ordinary skill in the art at the time of applicant’s invention, because discovering an optimum value involves only routine skill in the art. *In re Boesch*, 617 F.2d 272 (CCPA 1980).

***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: U.S. Patent Nos. 4,593,696 and 5,597,380.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nicole R. Kramer whose telephone number is 571-272-8792. The examiner can normally be reached on Monday through Friday, 8 a.m. to 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela Sykes can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

nrk

  
George Manuel